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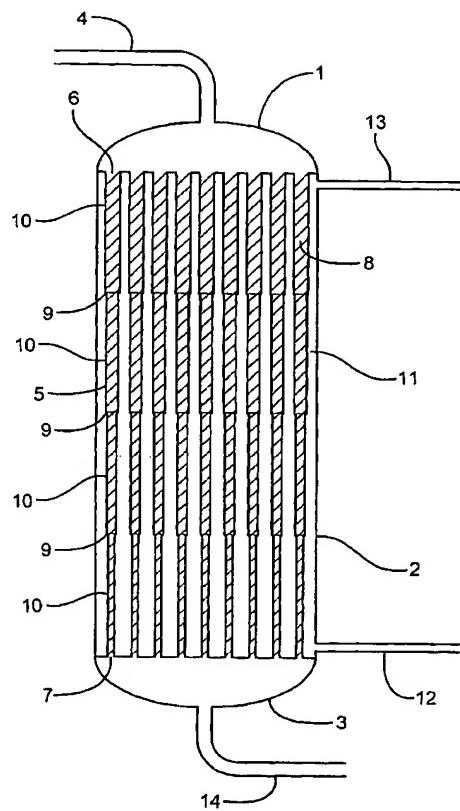
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(54) Title: PROCESS FOR MANUFACTURING ETHYLENE OXIDE



(57) **Abstract:** The present invention relates to a process for manufacturing ethylene oxide by the catalytic oxidation reaction of ethylene by molecular oxygen in a tube reactor. The reactor comprises a bundle of reaction tubes (5) which are immersed in a heat exchange fluid and filled with a solid silver-based catalyst (8) and which are traversed by a reactive gas current containing ethylene and molecular oxygen, which in contact with the catalyst forms the ethylene oxide. The area of the internal cross-section of the reaction tubes (5) decreases between the inlet (1) and the outlet (3) of the tubes over at least a portion of the length of the tubes and remains constant over any remaining portion. The process makes it possible to increase the selectivity of the reaction to ethylene oxide for a given production of ethylene oxide. It also makes it possible to use a maximum charge of active catalyst per unit of internal tube volume available in the reactor, owing in particular to an optimum heat exchange capable more particularly of supplying a relatively stable reaction temperature profile over the whole length of the reaction tubes and preventing in particular reaction runaways.

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